Outtakes: Peeking into Raptors’ Lives
Go behind the scenes with scientists tagging raptors as they migrate up the Atlantic coast.

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Fall 2017

Each fall a small group of bird biologists gather on Block Island, 13 miles south of Rhode Island, in Narragansett Bay. There they wait day after day for the raptors to come.
For about a century, ornithologists have known the importance of Block Island to songbirds. But until recently they hadn’t confirmed the ways in which migrating raptors—like merlins, peregrine falcons or American kestrels—use the island on their travels up and down the Atlantic coast, says Scott Comings, associate state director for The Nature Conservancy’s (TNC) work in Rhode Island. The Conservancy has protected about 46 percent of Block Island. Turns out, he says, “It’s sort of like a rest stop on I-95.”

In 2012, the Maine-based Biodiversity Research Institute (BRI) set out to learn more about raptors’ migrations up the Atlantic coast. For two years, they tracked raptors stopping on Block Island with help from a Department of Energy grant; the agency wanted information about the birds’ flyways as interest in offshore energy development grew. Beginning in 2014, TNC and the Bailey Wildlife Foundation began funding the work as the researchers tried to fill in data gaps on the ecology of migratory raptors’ stopovers, in which birds find shelter and food as they travel long distances.

“One of the reasons for that is that peregrine falcons are known to fly hundreds or more miles offshore,” says Chris DeSorbo, the raptor program director for BRI. Knowing where birds fly over the sea can help agencies make better decisions about where to allow offshore energy development.

Offshore wind is an ongoing conversation along much of the Atlantic Coast, making studying the effects on wildlife a key research question. Just last year, the nation’s first utility-scale offshore wind development began operating with five turbines off the coast of Rhode Island.

Bird banding has revealed a tremendous amount of information to ornithologists, but the mechanics of it mean that researchers have previously known where birds stop but not necessarily where they go in between rests. Satellite- and radar-tracking tools reveal so much more, and as transmitters have shrunk in size and weight over the years, smaller and smaller species have been studied with tracking devices.

“It’s allowing people to see amazing animals up close,” Comings says. “You’re seeing a window into their lives that you normally wouldn’t get.”

Each fall the team captures a variety of raptors—merlins, peregrine falcons, northern harriers, American kestrels. They take measurements and blood samples, band the legs of some of the birds
and attach nanotranmitters or larger GPS trackers to others. Then they wait for the data come in, and they follow the lives of the individuals they met on the island.

“One male peregrine—instead of heading south, this one went due east about 1,000 miles offshore and then went another 400 to 600 miles south,” DeSorbo says. “It was hitchhiking on these offshore barges in the ocean.” Another peregrine he tracked in 2012 got caught in Hurricane Sandy as it flew south and the storm moved north.

The merlin tracking has revealed perhaps even more. “We learned more about merlin migration than has ever been known,” Comings says. “Where they’re going and how they’re going—it’s information that’s never been had.”

All of it, he says, helps conservationists make decisions about what areas to conserve next.

In October 2016, Washington, D.C.-based photographer Karine Aigner waited in bird blinds with the researchers, capturing images for a Nature Conservancy magazine story on different ways scientists use technology to track animals. For more animal tracking stories, read the full magazine story. Below, Aigner shares images of the tracking process on Block Island.

— NCM

TAGS: Birds, Conservation Science, Energy, Migrations
BRI biologists Chris Persico and Lauren Gilpatrick remove a merlin from a net on Block Island. The researchers use nets to capture the birds before quickly removing them and rushing the bird into a nearby shed. “They measure its culmen [part of a bird’s bill], its beak, and then they measure talons and its ankles, claws,” says Aigner. They also weigh the birds, take blood samples from some of them, and—if the bird is large enough—place a nanotransmitter or a larger GPS tracker on it. Photo © Karine Aigner
To keep birds calm while measurements are taken—and to prevent them from harming the researchers—peregrine falcons are held in a large tube. Here Chris DeSorbo places a peregrine falcon in a tube as Deneb Sandack (back) and Oksana Lane look on. "It all happens very quickly because they want to keep the bird in hand for as little as possible," Aigner says. That’s great for the birds but not so great for a photographer. "We were trying to do the lighting and you can see how small that space is. We had to come up with ways to get the light in there: open the door and shoot from outside." Photo © Karine Aigner
All sorts of measurements can reveal information about the health of a bird. Here a researcher measures the tarsus—a type of leg bone—on a peregrine falcon. “They look like velociraptors, don’t they?” Aigner says. Photo © Karine Aigner
Wear and tear on a raptors' tail feathers can happen in the nest before the birds begin to migrate. Here a researcher assesses the worn-down tips of a sharp-skinned hawk's tail feathers. Photo © Karine Aigner
Biologist Lauren Gilpatrick measures the bill of a peregrine falcon. Photo © Karine Aigner
The raptor-tagging operation is a busy one. While researchers Gilpatrick and Persico are taking blood samples from a peregrine falcon, Deneb Sandack keeps an eye out for incoming raptors. The shed is lined with windows so that the scientists can constantly scan the skies. Photo © Karine Aigner
“These are the most passionate biologists I’ve worked with,” Aigner says. “They’re just completely enthralled with what they do and they’re in love with the species.” Here, Chris Persico straps a lightweight pack containing a satellite transmitter onto a peregrine falcon, which wears a falconer’s hood to calm it. Deneb Sandack watches. The birds must be a certain weight and size to wear the packs to ensure the trackers will affect them as little as possible. Photo © Karine Aigner
Researchers use a light-cured resin to attach a nanotransmitter to the base of a merlin’s tail. Smaller than GPS transmitters, nanotransmitters are light enough to be worn by the smaller merlins. Photo © Karine Aigner
A researcher examines an American kestrel's wings before releasing the bird on Block Island. Photo © Karine Aigner
A researcher releases a merlin. "Every bird that came in, it was like the first of the species [the biologists had] ever seen," Aigner says. "They'd fawn all over the seventh merlin of the day as it were the first merlin in 10 years. That was really cool to see." Photo © Karine Aigner

3 COMMENTS

BY BRENDA DYER | REPLY
SEPTEMBER 28, 2017

Oh, they are all so beautiful. I love your pictures. Peregrine falcons are my most favorite birds. I'm not a scientist, but a lover of nature. Thank you so much.

BY RAQUEL DUARTE | REPLY
SEPTEMBER 30, 2017

What a beautiful creature!

BY BRENDA DYER | REPLY
OCTOBER 21, 2017
Wonderful